

Electric Driver for High Pressure Airless Sprayer

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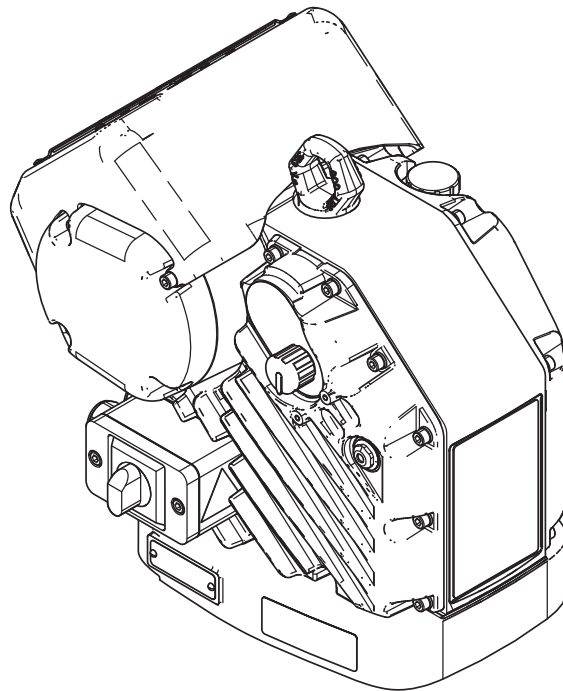
Electric driver for application of protective coatings. For professional use only.
Not approved for use in explosive atmospheres or hazardous locations.



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.

Model 24V016



ti23973a

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Related Manuals




Manuals are available at www.graco.com.

Component manuals in English:

| | |
|--------|---------------------------------------|
| 333208 | Electric High Pressure Sprayer Manual |
|--------|---------------------------------------|

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

|  WARNING | |
|--|---|
|  | <p>ELECTRIC SHOCK HAZARD</p> <p>This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • Turn off and disconnect power at main switch before disconnecting any cables and before servicing or installing equipment. • Connect only to grounded power source. • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations. |
|  | <p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc). • Keep work area free of debris, including solvent, rags and gasoline. • Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present. • Ground all equipment in the work area. See Grounding instructions. • Use only grounded hoses. • Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic or conductive. • Stop operation immediately if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem. • Keep a working fire extinguisher in the work area. |

WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.



MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.



PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Installation

| | | | | | | |
|---|--|--|--|--|--|--|
| | | | | | | |
| <p>Improper wiring may cause electric shock or other serious injury. All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</p> | | | | | | |

Power Supply

See **Table 1** for power supply requirements. The system requires a dedicated circuit protected with a circuit breaker.

Table 1: Power Supply Specifications

| Voltage | Phase | Hz | Current |
|-------------|-------|-------|---------|
| 200-240 VAC | 1 | 50/60 | 20 A |

Select the minimum cord wire gauge based on length according to the table below:

| Length | Gauge | mm ² |
|------------------|--------|-----------------|
| 50 ft (15.24 m) | 12 AWG | 3.31 |
| 100 ft (30.48 m) | 10 AWG | 5.26 |
| 200 ft (60.96 m) | 6 AWG | 13.29 |
| 300 ft (91.44 m) | 4 AWG | 21.14 |

Connect Power

- Cut power cord wires to the following lengths:
 - Ground wire - 6.5 inches (16.5 cm)
 - Power wires - 3.0 inches (7.6 cm)
 - Add ferrules as necessary. See FIG. 1.

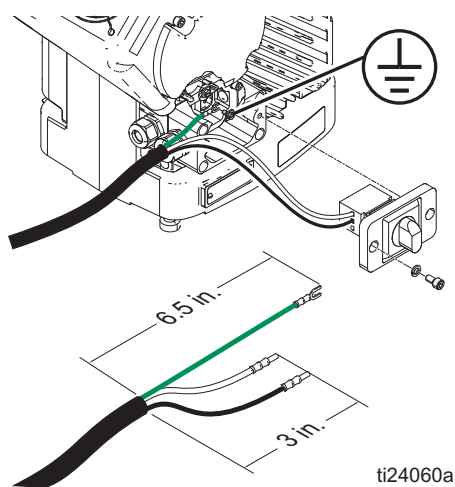


FIG. 1: Power Cord

- Bring cord to unit and remove four screws to separate junction box cover (G) with power switch (E) from remainder of sprayer. See FIG. 2.

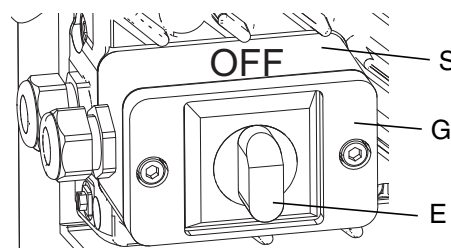


FIG. 2: Power Switch

- With power switch (E) and junction box cover (G) detached from machine, wires inside junction will appear as below.

NOTE: Two wires will be installed in both terminals. See FIG. 3:

- For Series A and B: terminals 1L1 and 3L2
- For Series C: terminals 1L1 and 5L3

NOTE: Press gasket against back sealing face of junction box to ease installation of power cord.

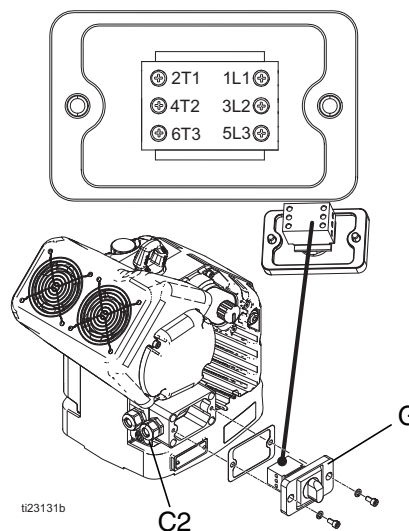


FIG. 3: Terminal Connections

- Insert power cord (from step 1) through cord grip (C2) and into junction box (S).

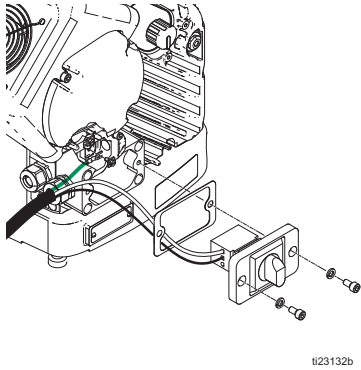
NOTE: Power wires should be installed into terminals. See FIG. 3:

- Series A and B: terminals 2T1 and 4T2
- Series C: terminals 2T1 and 6T3

Installation

- Attach ground wire to ground terminal inside junction box (S).

NOTE: The power cord attaches to a separate ground screw than the ground screw that is already attached.



- Place fan wires and other power wires into open area on either side of disconnect block (J) as space permits. Reinstall junction box cover. See FIG. 4.

NOTICE

If wires get pinched when the screws are tightened, damage will occur. Make sure all wires are routed correctly before installation.

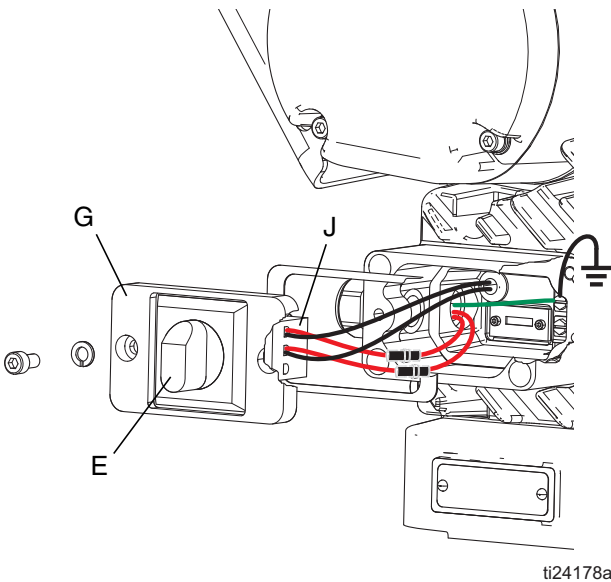


FIG. 4: Grounding Wire

- Replace junction box screws and washers removed in step 2 and tighten cord grip to securely hold power cord in junction box (S). See FIG. 5.

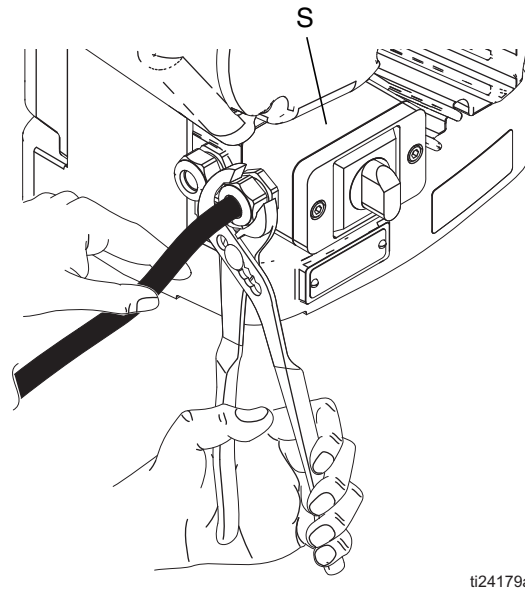


FIG. 5: Junction Box Screws and Strain Relief

Grounding

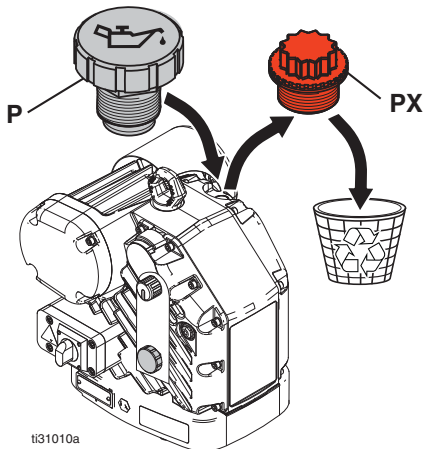
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|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.

Driver: The driver is grounded through the power cord.

Install Vented Oil Cap Before Using Equipment

The driver gear-box is shipped from the factory pre-filled with oil. The temporary unvented cap (PX) prevents oil leaks during shipment. This temporary cap must be replaced with the vented oil cap (P), supplied with the equipment, before use.

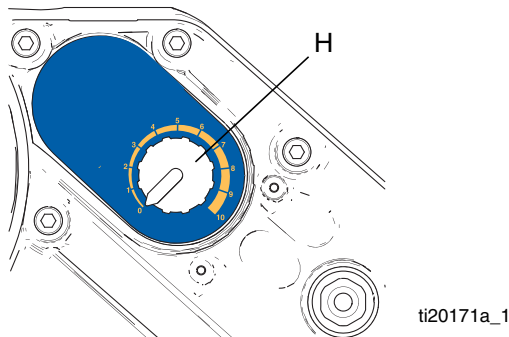


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FIG. 6: Unvented and Vented Oil Caps

Setup

1. Pull pressure adjustment knob (H) out and turn counterclockwise until it stops. Push the knob in to lock.



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FIG. 7: Pressure Adjustment Knob

2. Turn power switch (E) OFF. Connect unit to power source. See FIG. 2, page 5.

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Pull pressure adjustment knob (H) out and turn counterclockwise until it stops. Push the knob in to lock.
2. Relieve all fluid pressure as explained in your separate sprayer manual.

Operation



The motor will adjust the speed to maintain a constant fluid pressure.

1. Pull the control knob (H) out to set. Turn the knob clockwise to increase the pressure, or counter-clockwise to decrease the pressure. Push the knob to lock. See FIG. 7.

Maintenance

NOTICE

Do not open/remove gear cover. The gear side is not intended to be serviced. Opening the gear cover may alter the factory set bearing pre-load and may reduce the product life.

Preventative Maintenance Schedule



The operating conditions of your particular system determine how often maintenance is required. Establish a preventative maintenance schedule by recording when and what kind of maintenance is needed, and then determine a regular schedule for checking your system.

Change the Oil

NOTE: Change the oil after a break-in period of 200,000 to 300,000 cycles. After the break-in period, change the oil once per year.

1. Place a minimum 2 quart (1.9 liter) container under the oil drain port. Remove the oil drain plug (15). Allow all oil to drain from the driver.
2. Reinstall the oil drain plug (15). Torque to 18-23 ft-lb (25-30 N•m).
3. Open the fill cap (P) and add Graco Part 16W645 ISO 220 silicone-free synthetic EP gear oil. Check the oil level in the sight glass (K). (See FIG. 8.) Fill until the oil level is near the halfway point of the sight glass. The oil capacity is approximately 1.0 - 1.2 quarts (0.9 - 1.1 liters). **Do not overfill.**
4. Reinstall the fill cap.

Check Oil Level

Check the oil level in sight glass (K). (See FIG. 8.) The oil level should be near the halfway point of the sight glass when the sprayer is not running. If oil is low, open fill cap (P) and add Graco Part No. 16W645 ISO 220 silicone-free synthetic EP gear oil. See FIG. 8.

The oil capacity is approximately 1.0 - 1.2 quarts (0.9 - 1.1 liters). **Do not overfill.**

NOTICE

Only use oil with Graco part number 16W645. Any other oil may not lubricate properly and can cause damage to the drive train.

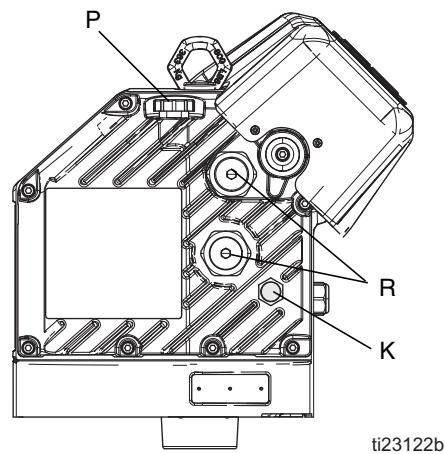
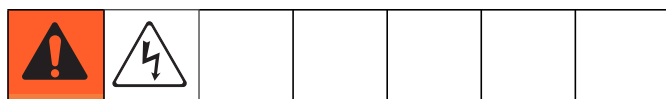


FIG. 8: Sight Glass and Oil Fill Cap

Bearing Pre-Load

See FIG. 8. The bearing pre-loads (R) are factory set and are not user adjustable. Do not adjust the bearing pre-loads.

Troubleshooting



Power Saving Mode

When fast blinking is displayed, the sprayer has entered Power Saving Mode mode. When the sprayer is on and pressurized but the pump has not moved any material in 30 minutes, the sprayer will enter Power Saving Mode and will only control up to 75% of the maximum pressure.

Power Saving Mode will be exited when:

- Material starts to dispense and causes the pump to move, OR
- The pressure knob is adjusted, OR
- Power is cycled OFF and ON

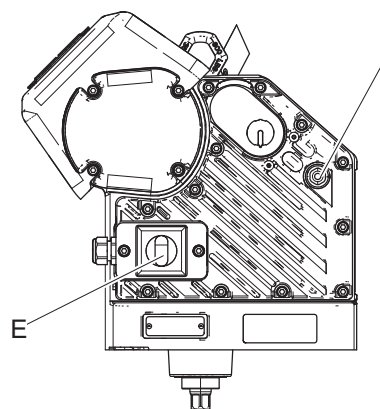
Error Codes

Error codes can take two forms:

Alarm: alerts you to the alarm cause and shuts down the pump.

Deviation: alerts you to the problem, but pump may continue to run past the set limits until the system's absolute limits are reached.

NOTE: The blink code is displayed using the power indicator (L) on the driver. The blink code given below indicates the sequence. For example, blink code 2 indicates two blinks, a pause, and then the sequence repeats.



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NOTE: To clear an error code, first try turning the pressure adjustment knob (H) counterclockwise until it stops. If the status indicator (L) does not stop blinking shortly after turning the knob to zero, cycle the power by turning the power switch (E) to the off position for at least 30 seconds before turning it back on.

| Blink Code | Error Type | Troubleshooting Steps |
|------------|------------|--|
| 1 | Alarm | <p>Voltage Too Low</p> <ul style="list-style-type: none"> • Verify that line voltage is within the range specified in Technical Data, page 24. • Use the recommended cord (see page 5). • Cycle power and check status indicator to see if error is still active. |
| 2 | Alarm | <p>Voltage Too High</p> <ul style="list-style-type: none"> • Verify that line voltage is within the range specified in Technical Data, page 24. • Cycle power and check status indicator to see if error is still active. • Verify that the outlet check valve is installed on pump and functions properly. A faulty outlet check valve can result in excessive pump speed, causing high voltage internally to the electric driver. |
| 3 | Deviation | <p>Low Temperature</p> <ul style="list-style-type: none"> • Warm equipment. • Contact your Graco distributor or Tech Service for more information. |

| Blink Code | Error Type | Troubleshooting Steps |
|------------|------------|--|
| 4 | Deviation | <p>High Temperature The temperature of the system is near the maximum operation temperature. The performance has been reduced to prevent the sprayer from completely shutting down.</p> <ul style="list-style-type: none"> • Check fan operation. Clean fan and driver housing. Verify fuses are intact in junction box. • Reduce pressure, duty cycle, or gun tip size. • Move unit to a cooler location. |
| 5 | Alarm | <p>Motor Temperature Fault Motor is running too hot. Allow unit to cool.</p> <ul style="list-style-type: none"> • Check fan operation. Clean fan and driver housing. Verify fuses are intact in junction box. • Reduce pressure, duty cycle, or gun tip size. • Move unit to a cooler location. |
| 6 | Alarm | <p>Board Temperature Fault The control board is running too hot. Allow unit to cool.</p> <ul style="list-style-type: none"> • Check fan operation. Clean fan and driver housing. Verify fuses are intact in junction box. • Reduce pressure, duty cycle, or gun tip size. • Move unit to a cooler location. |
| 7 | Alarm | <p>Encoder Calibration Error</p> <ul style="list-style-type: none"> • Cycle power and check status indicator to see if error is still active. • Calibrate the encoder (see page 17). • Contact your Graco distributor or Tech Service for more information. |
| 8 | Alarm | <p>Encoder Error</p> <ul style="list-style-type: none"> • Cycle power and check the status indicator to see if the error is still active. • Verify that the encoder cable is connected securely. • The encoder may need to be replaced. • Contact your Graco distributor or Tech Service for more information. |
| 9 | Alarm | <p>Software Versions Do Not Match</p> <ul style="list-style-type: none"> • Obtain software update token and follow Software Update procedure (contact your Graco distributor or Tech Service for more information). |
| 10 | Alarm | <p>Circuit Board Communication Failure</p> <ul style="list-style-type: none"> • Cycle power and check status indicator to see if error is still active. • Contact your Graco distributor or Tech Service for more information. |
| 11 | Alarm | <p>Internal Circuit Board Hardware Failure</p> <ul style="list-style-type: none"> • Cycle power and check status indicator to see if error is still active. • Contact your Graco distributor or Tech Service for more information. |
| 12, 13 | Alarm | <p>Internal Software Error</p> <ul style="list-style-type: none"> • Cycle power and check status indicator to see if error is still active. • Contact your Graco distributor or Tech Service for more information. |
| Fast Flash | Deviation | See Power Saving Mode , page 9. |

| Problem | Cause | Solution |
|--|---|--|
| Driver does not turn over and LED is off | Over voltage (greater than 300 V) | <ul style="list-style-type: none"> • Check power supply |
| | No power to control board | <ul style="list-style-type: none"> • Contact your Graco distributor or Tech Service for more information. |
| Driver does not turn over and LED is on | Encoder fault | <ul style="list-style-type: none"> • Cycle power. • Contact your Graco distributor or Tech Service for more information. |
| Oil is leaking | Oil was over-filled | <ul style="list-style-type: none"> • Drain and refill as stated in Check Oil Level, page 8. |
| | Drain plug not tightened properly | <ul style="list-style-type: none"> • Torque to 18-23 ft-lb (25-30 N•m). |
| | Seal cartridge o-ring missing or damaged. | <ul style="list-style-type: none"> • Replace shaft bearing assembly. |

Repair



To prevent skin injection and splashing, never open a camlock hose or applicator fitting while there is pressure in the fluid line. Perform **Pressure Relief Procedure**, page 7, before performing any repair procedure.

Replace Shaft Bearing Assembly



NOTE: Series A drivers require a different shaft bearing assembly part number. See **Parts** for the correct part numbers.

1. Stop pump at bottom of its stroke. Shut off and remove power to driver.
2. Perform **Pressure Relief Procedure**, page 7.
3. Disconnect lower from driver. See sprayer manual.
4. Drain oil from driver. See **Change the Oil**, page 8.
5. Reinstall oil drain plug. Torque to 18-23 ft-lb (25-30 N•m).
6. Unscrew shaft bearing assembly (14) from driver. See **Parts**, page 20.
7. Install new shaft bearing assembly. Torque to 175-200 ft-lb (240-280 N•m).
8. Fill with oil. See **Change the Oil**, page 8.
9. Reconnect lower to driver.
10. Turn power ON and resume operation.

Replace Fan Fuses



1. Perform **Pressure Relief Procedure**, page 7.
2. Disconnect unit from power source.
3. Remove two screws (53) and remove junction box cover (G) from driver to gain access to the disconnect block (J). Gently pull out fuse holders.
4. Unscrew fuse holder, remove old fuse, and replace with new fuse (Graco part number 116682) (5 mm x 20 mm, 500 mA, 250V, Slow Blow). Reconnect fuse holder and tighten.

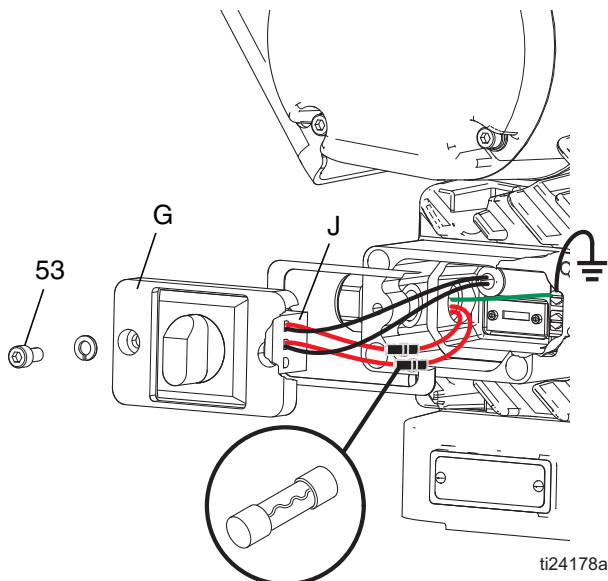


FIG. 9: Fuse Location

5. Repeat step 4 with second fuse.
6. Tuck wires back into junction box (S) around disconnect block (J) and reinstall junction box with two screws and washers.

NOTE: Make sure no wires get pinched during installation.

Replace Fan Assembly



1. Perform **Pressure Relief Procedure**, page 7.
2. Disconnect unit from power source.
3. Remove two screws (53) and remove junction box cover (G) from driver to gain access to the disconnect block (J). See FIG. 9.
4. Loosen screws for 1L1 and 5L3 and gently remove wires from each location.

NOTE: For Series A and Series B motors, use terminals 1L1 and 3L2.

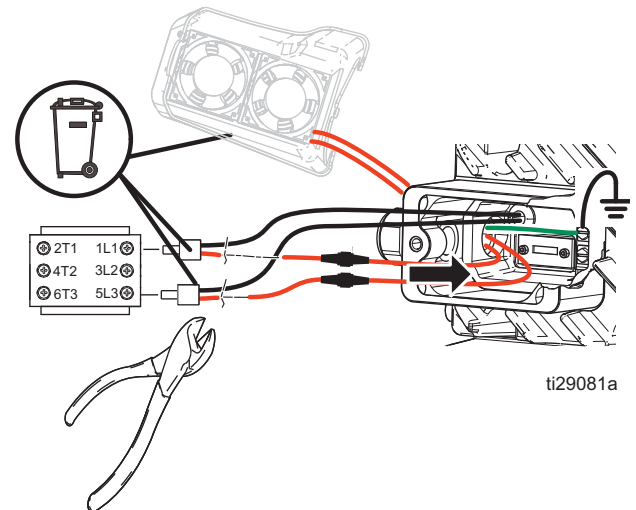


FIG. 10: Remove Wires

5. Use a wire cutter to cut ferrule tips from fan wires and motor power wires close to ferrules.

NOTE: Do not cut the tip off of the ground wire. See FIG. 10.

- Remove grounding screw (GS) and disconnect green grounding wire coming out of fan cord grip (C1) attached to driver (not the junction box).

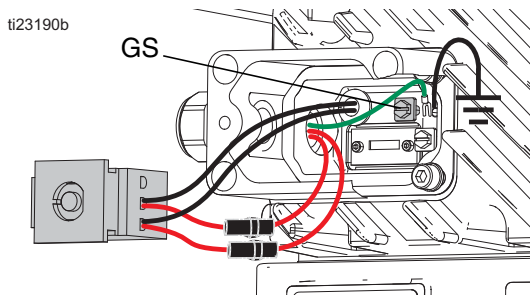


FIG. 11: Grounding Screw

- Loosen fan cord grip (C1) attached to driver and pull out fan wires.

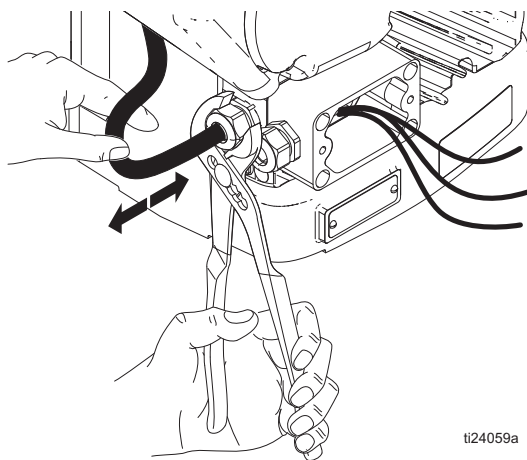


FIG. 12: Remove Fan Wires

- Remove screws that attach fan assembly to driver and pull up on end farthest from junction box. Slide assembly toward junction box to remove.

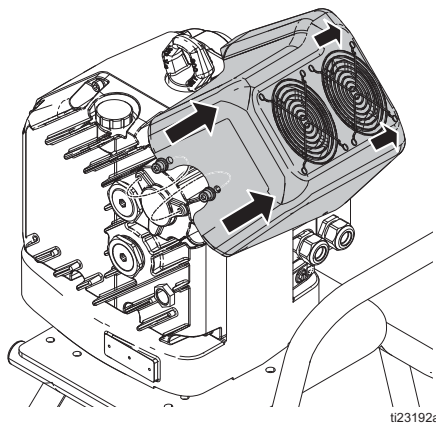


FIG. 13: Fan Assembly Removal

- Install new fan assembly. To reattach the fan assembly, slide cover into slots for tabs located on junction box side and gently push down far end. Apply thread locker and use supplied fasteners and washers. Torque to 15 - 20 ft-lb (20 - 27 N•m).

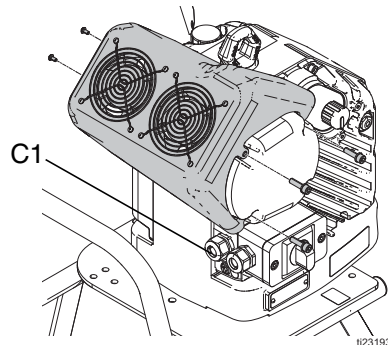
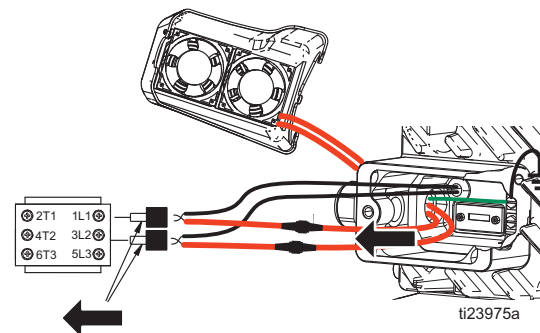


FIG. 14: Fan Assembly Installation

- Route wires through fan cord grip (C1) attached to driver (not the junction box (S)).

- Reattach the ground wire to the grounding screw. Tighten ground screw. See FIG. 11.



- Use a ferrule to connect each fan wire to one of two wires coming out of the motor grommet. Then attach one wire set into the disconnect box location 1L1 and the other wire into location 3L2. See FIG. 11.

- Gently tuck wires back into junction box (S) around disconnect block (J) and reinstall junction box cover (G). Replace two screws (53) and washers, then tighten. See FIG. 9, page 13.

NOTICE

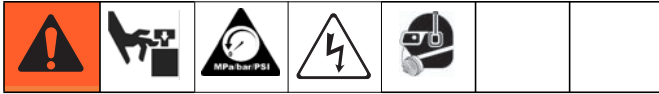
If wires get pinched when the screws are tightened, damage will occur. Make sure all wires are routed correctly before installation.

NOTE: Make sure no wires get pinched during installation.

- Tighten cord grip attached directly to driver assembly.

Replace Electronics Cover

Removal



1. Perform **Pressure Relief Procedure**, page 7.
2. Disconnect unit from power source.
3. Remove the lower from the sprayer (see the Sprayer manual). **NOTE:** This is required to complete the calibration procedure (page 17).
4. Remove two screws (6) and remove junction box cover (5).

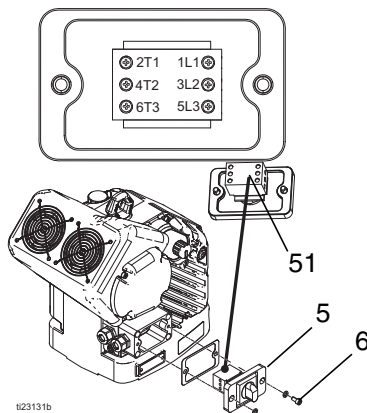


FIG. 15: Junction Box Cover

5. Loosen cord screws on disconnect block (51) and disconnect wires from locations 1L1 and 5L3.

NOTE: On Series A and Series B motors, terminal locations are 1L1 and 3L2.

NOTE: Power cord cables (excluding the ground wire) may remain attached.

6. Unscrew ground screws from fan and power cord ground wires.

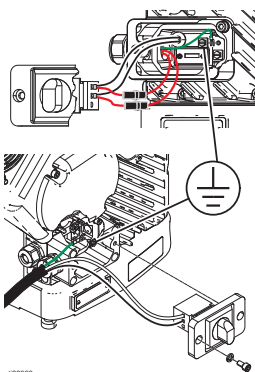


FIG. 16: Ground Screw Location

7. Use a wire cutter to cut ferrule tips from fan wires and motor power wires. **NOTE:** Cut the wires as close to the ferrules as possible. Do not cut the tip off of the ground wires.

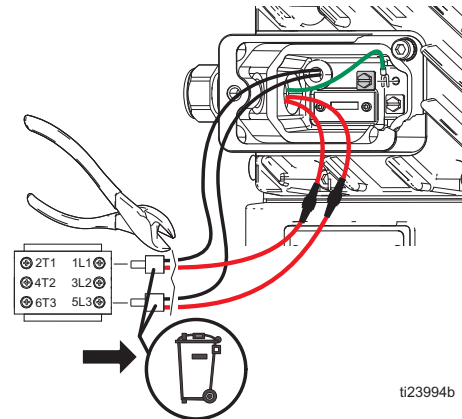


FIG. 17: Disconnect Fan Wires

8. Use an adjustable wrench to loosen the fan cord grip (C1).

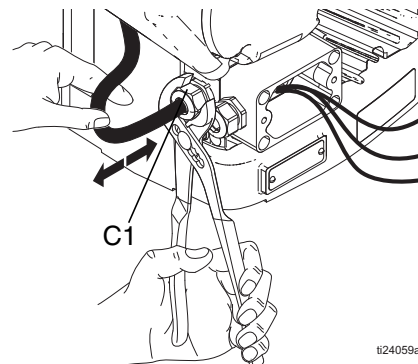


FIG. 18: Loosen Cord Grip

9. Pull the fan wires out through the cord grip.
10. Remove four bolts (56) and washers, gasket (52), and junction box sleeve (S).

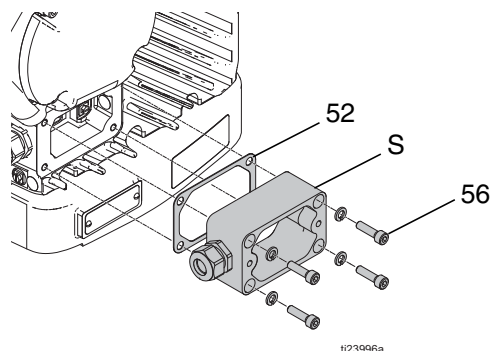


FIG. 19: Junction Box Sleeve

11. Remove 12 screws (20) and washers from electronics cover (50).

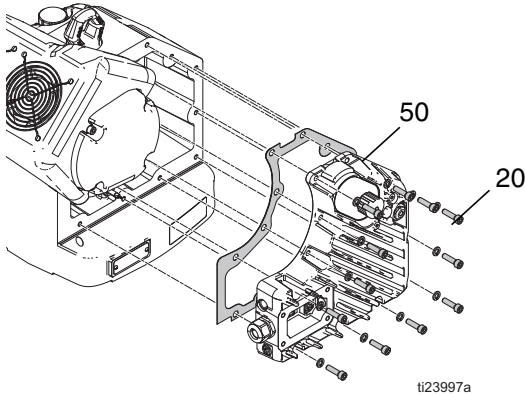


FIG. 20: Electronics Cover Removal

12. Carefully tilt electronics cover (50) down.

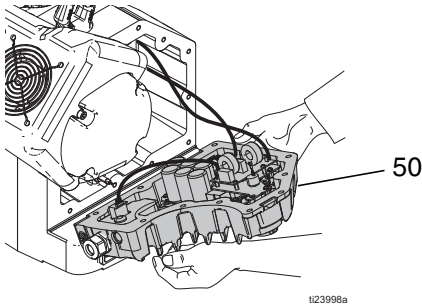


FIG. 21: Tilt Electronics Cover

NOTICE

All wires must be disconnected before the cover is completely removed. Hold the cover in place while disconnecting wires or let the cover rest on a work surface to avoid damaging the wires and connections.

13. Pull wire connectors down, out of the harness clip and disconnect the motor power and motor temperature wires (M).

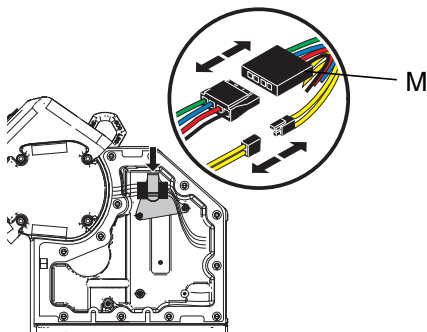


FIG. 22: Motor Wires

14. Disconnect the stroke position sensor wire (H).

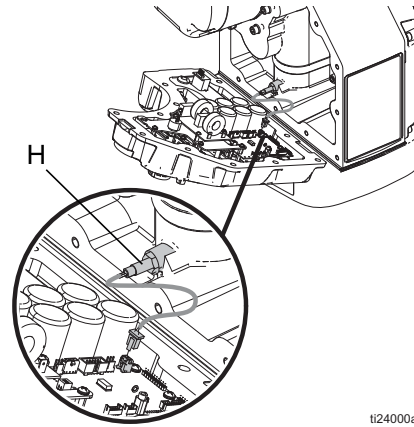


FIG. 23: Stroke Position Wire

15. Disconnect the encoder wire (E).

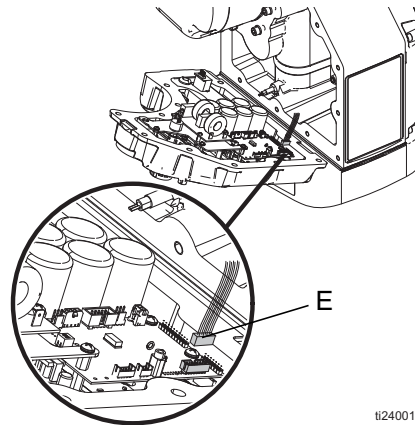


FIG. 24: Encoder Wire

16. Discard the used cover gasket (53) and the junction box gasket (52).

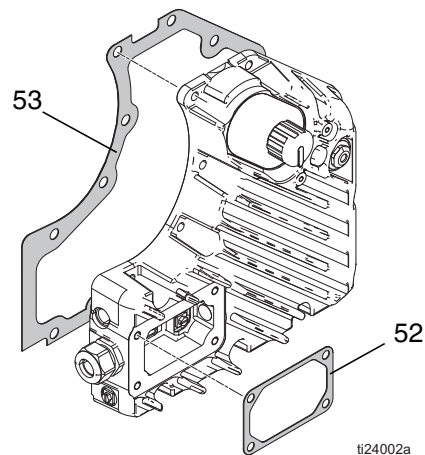


FIG. 25: Electronics Cover and Junction Box Gaskets

Installation

1. Install the new cover gasket (included in the electronics cover kit). See FIG. 25, page 16.
2. Reconnect all wires.
3. Install electronics cover (50) and tighten 12 screws (20). Torque to 15-20 ft-lb (20-27 N•m). See FIG. 20, page 16.

NOTICE

If wires get pinched when the cover screws are tightened, damage will occur. Make sure all wires are positioned inside the cover before installation.

4. Install new junction box gasket.
5. Route fan cable through fan cord grip.
6. Connect the stripped fan wire to the motor wire and crimp the wires together.

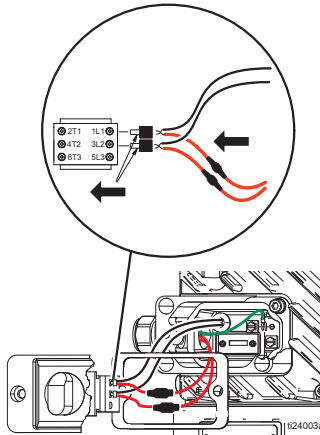


FIG. 26: Install Fan Wires

7. Connect fan ground wire. See FIG. 19, page 15. See FIG. 16, page 15.
8. Use an adjustable wrench to tighten the fan cord grip (C1). See FIG. 18, page 15.
9. Install gasket (52), junction box sleeve (S), and tighten four bolts (56). See FIG. 19, page 15.
10. Install junction box cover (G) and tighten two screws (6). See FIG. 15, page 15.
11. Install wires into disconnect switch (51) and tighten wire screws.

NOTE: The lower must be removed from the system in order to calibrate correctly. The calibration stroke length is longer than the operating stroke. Leaving the lower attached will cause the driver rod to contact the lower rod and it will not calibrate correctly.

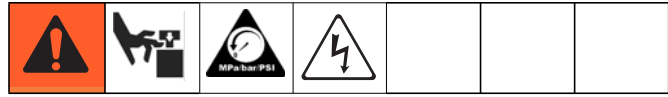
12. Connect power cord.
13. Engage power.

Calibration

NOTE: The driver must be de-coupled from the lower and must be able to cycle freely with no obstructions.

1. Cycle power to the driver by first turning the power switch (S) to OFF, and then to ON again.
2. Wait for the status indicator LED (L) to turn on solid or start blinking.
3. Within 30 seconds, rapidly turn the pressure control knob (N) back and forth from 0 to 10 at least five times and then set the knob back to 0. If the status indicator LED (L) was solid before, it will begin blinking an encoder calibration error (code 8) during the calibration process.
4. The driver output shaft (H) will run up and down slowly over the course of several minutes.
5. Midway through the auto-calibration process, the driver output shaft (H) will pause as it moves to the next step.
6. The driver output shaft (H) will move up and down faster 5-6 times.
7. Ensure the auto-calibration process is complete before continuing. Wait for the LED to stop blinking.

Repair Token Cable



1. Perform **Pressure Relief Procedure**, page 7.
2. Disconnect unit from power source.
3. Remove 12 screws (20) and washers from electronics cover (50). See FIG. 20, page 16.
4. Carefully tilt electronics cover (50) down. See FIG. 21, page 16.

NOTICE

All wires must be disconnected before the cover is completely removed. Hold the cover in place while disconnecting wires or let the cover rest on a work surface to avoid damaging the wires and connections.

5. Check the token wire (T) connections. Replace the wire if it is damaged. **NOTE:** Make sure the token wire connection is positioned with the wires facing the bottom of the sprayer (as seen below).

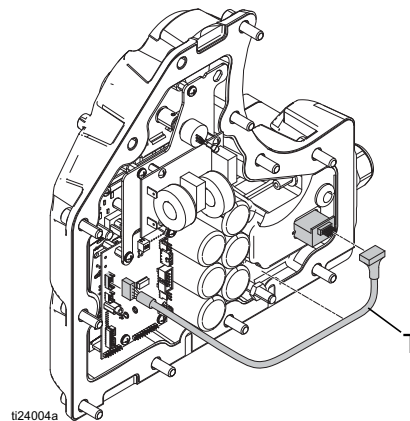


FIG. 27: Token Wire

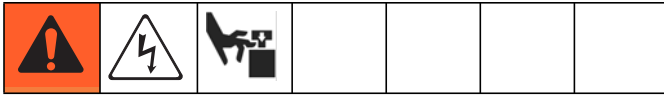
6. Install cover and tighten 12 screws (20) and washers. Torque to 15-20 ft-lb (20-27 N•m).

NOTICE

If wires get pinched when the cover screws are tightened, damage will occur. Make sure all wires are positioned inside the cover before installation.

7. Connect power cord.

Software Update Procedure



1. Perform **Pressure Relief Procedure**, page 7.
2. Disconnect unit from power source.
3. Remove two screws (53) and washers. Then remove junction box cover (G) from driver to gain access to the token slot (TS).

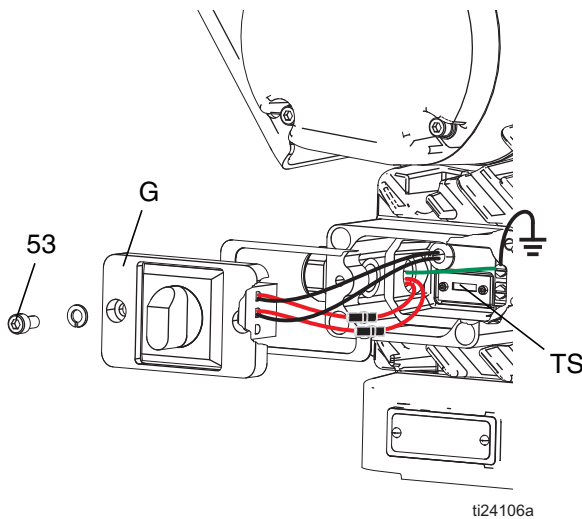


FIG. 28: Token Slot Location

4. Insert and press token firmly into the slot.
- NOTE:** The token has no preferred orientation.
5. Tuck the wires back into the junction box (S) and reinstall junction box cover (G) with two screws and washers.

NOTICE

If wires get pinched when the cover screws are tightened, damage will occur. Make sure all wires are positioned inside the cover before installation.

6. Connect the unit to the power source and turn it ON.

7. The red indicator light (L) will flash while the software is being loaded (approximately 30 seconds). When the software is completely loaded, the red light will turn off for four seconds before the software version flashes. Then a solid light will stay on.

NOTE: Whenever the unit is powered on and the token is present in the token slot, the indicator light will flash the three series software code one time. Example: 1.02.003 would be one blink, a pause, two blinks, as pause, then three blinks. Normal operation will resume after the software version displays.

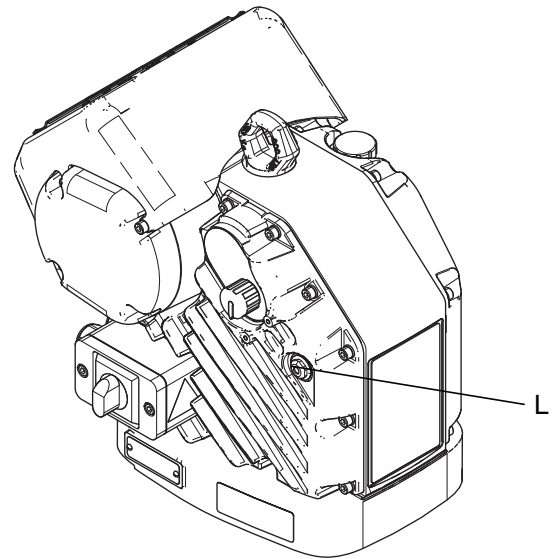


FIG. 29: Red Indicator Light Location

8. Turn off the unit and disconnect from the power source.
9. Remove two screws (53) and washers. Then remove junction box cover (G) from driver to gain access to the token slot (TS).
10. Remove the token from the slot.
11. Tuck the wires back into the junction box (S) and reinstall junction box cover (G) with two screws and washers.

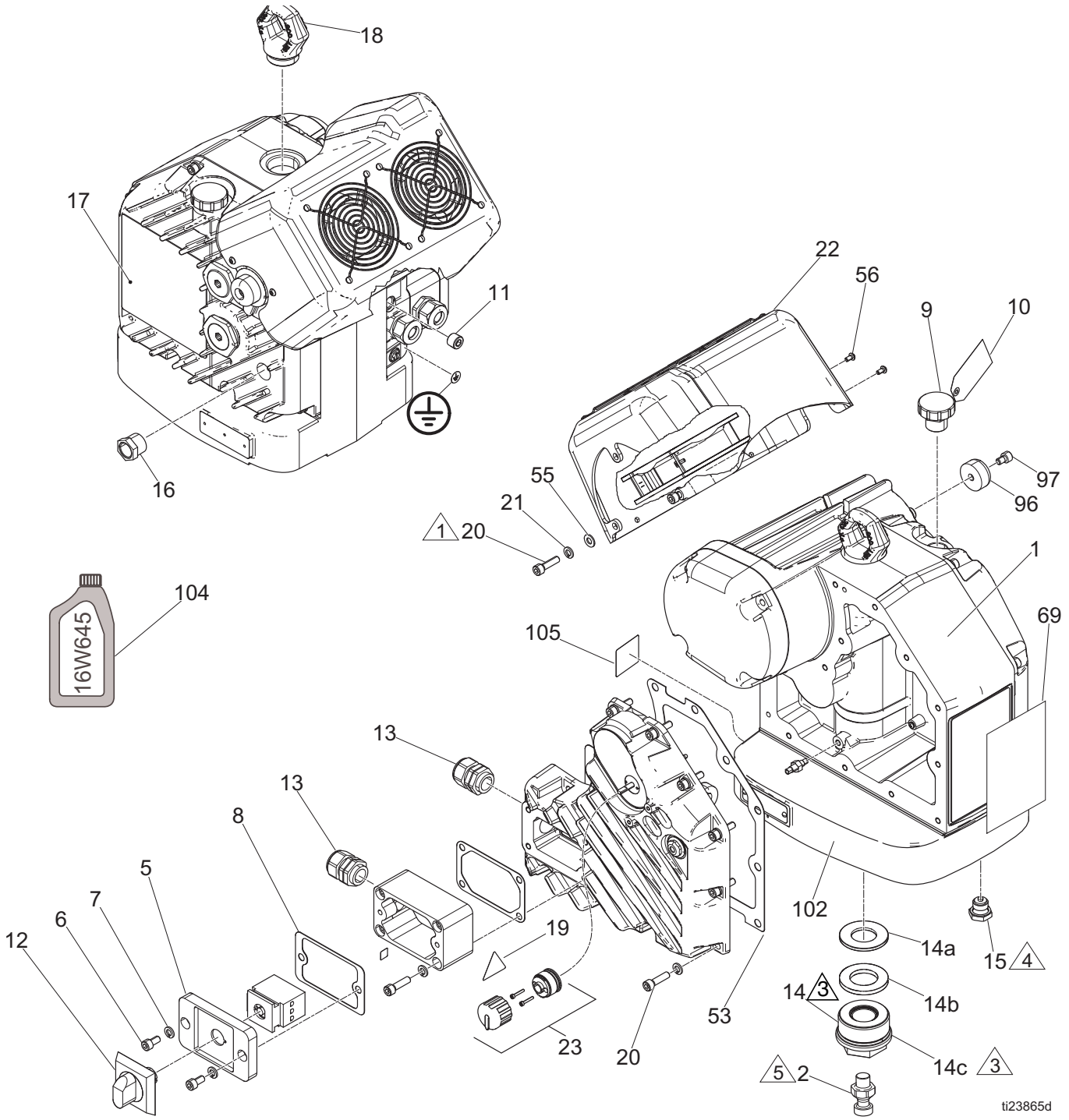
NOTICE

If wires get pinched when the cover screws are tightened, damage will occur. Make sure all wires are positioned inside the cover before installation.

NOTE: The latest software version for each system can be found by searching “Software Version Change History for 17N254” at Graco Technical Support. Contact a technical support representative before upgrading.

Parts

Electric Driver



ti23865d

FIG. 30: Electric Driver Parts

Parts List - Electric Driver (24V016)

| Ref. | Part | Description | Qty. | Ref. | Part | Description | Qty. | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|-------------------------|--|--------|-------------------------|------|------|-------------|------------------------|-------------------------------------|----------|--|----|-----------------------------------|---------|---|-----|----------------------|------------|--------|-----|--------------------|---------|--------|-----|--------|--------|-------------------------|
| 1 | | CHASSIS | 1 | 97 | 127463 | SCREW, cap, socket head | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 15H392 | ADAPTER, rod Xtreme | 1 | 101‡ | 17B505 | SLEEVE, junction box | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 5† | 17B507 | COVER, junction box | 1 | 102 | 17B553 | ERROR CODE LABEL | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 6† | 115264 | SCREW, cap, socket head | 2 | | 16Y491 | TOKEN CABLE (not shown) | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 7† | 104572 | WASHER, lock spring | 2 | 104 | 16W645 | GEAR LUBE | 0 | | | | | | | | | | | | | | | | | | | | | | |
| 8*† | 17B509 | GASKET, cover, junction box | 1 | | 116682 | FUSE (not shown) | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 15H525 | CAP, fill | 1 | | 24W120 | SENSOR, stroke position | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | TAG, oil | 1 | 105▲ | 195792 | LABEL, warning | 1 | | | | | | | | | | | | | | | | | | | | | | |
| 11 | 555448 | PLUG, stl, 3/8 pipe hex | 1 | * 24W078 KIT, electronics, cover (includes 8, (12x) 20, (12x) 21, 23, 50, 53, and ferrules) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | 123971 | KNOB, disconnect, operator | 1 | † 127854 Junction Box Cover Kit (includes 5, 8, (2x) 6, (2x) 7) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | 121171 | GRIP, cord, .35-.63, 3/4 | 2 | ‡ 127855 Junction Box Sleeve Kit (includes (4x) 20, (4x) 21, 101) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | See Part 14 Table | | | ▲ Replacement Warning labels, signs, tags, and cards are available at no cost. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | 15H432 | PLUG, oil drain | 1 | ★ The driver gear-box is shipped from the factory pre-filled with oil. Additional oil must be purchased separately. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | 24E315 | SIGHT GLASS | 1 | Part 14 Table: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17▲ | 16W360 | LABEL, safety, warning | 1 | <table border="1"> <thead> <tr> <th rowspan="2">Ref.</th> <th rowspan="2">Description</th> <th colspan="2">Driver 24V016 Part No.</th> </tr> <tr> <th>Series A</th> <th>Series B & Current</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>CARTRIDGE, out-put seal</td> <td>24K341✘</td> <td>25C164</td> </tr> <tr> <td>14a</td> <td>KIT, washer, support</td> <td>See Notice</td> <td>25C162</td> </tr> <tr> <td>14b</td> <td>KIT, bumper, lower</td> <td>16K679✘</td> <td>25C163</td> </tr> <tr> <td>14c</td> <td>O-RING</td> <td>108993</td> <td>25C165 (pack of two)</td> </tr> </tbody> </table> | | | | Ref. | Description | Driver 24V016 Part No. | | Series A | Series B & Current | 14 | CARTRIDGE, out-put seal | 24K341✘ | 25C164 | 14a | KIT, washer, support | See Notice | 25C162 | 14b | KIT, bumper, lower | 16K679✘ | 25C163 | 14c | O-RING | 108993 | 25C165 (pack of two) |
| Ref. | Description | Driver 24V016 Part No. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Series A | Series B & Current | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | CARTRIDGE, out-put seal | 24K341✘ | 25C164 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14a | KIT, washer, support | See Notice | 25C162 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14b | KIT, bumper, lower | 16K679✘ | 25C163 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14c | O-RING | 108993 | 25C165 (pack of two) | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 15F931 | RING, lift, sst | 1 | ✘ Kit 24K341 does not include part 14b. 16K679 must be ordered separately. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19▲ | 16T764 | LABEL, warning | 1 | NOTICE | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20*‡ | 109114 | SCREW, cap, sch | 31 | Do not use a washer (14a) with Series A drivers. Use of a washer may cause damage to seal (in cartridge 14c). | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21*‡ | 104572 | WASHER, lock, spring | 28 | Part Specifications: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22 | 24V224 | COVER, fan, assy (includes fan, cable and fasteners) | 1 | <table border="1"> <thead> <tr> <th>Ref.</th> <th>Instruction</th> </tr> </thead> <tbody> <tr> <td>△1</td> <td>Torque to 20 - 27 N•m (15-20 ft-lb)</td> </tr> <tr> <td>△3</td> <td>Torque to 240 -280 N•m (175-200 ft-lb)</td> </tr> <tr> <td>△4</td> <td>Torque to 25-30 N•m (18-23 ft-lb)</td> </tr> <tr> <td>△5</td> <td>Torque to 195-210 N•m (145-155 ft-lb). Apply service-able medium thread locker.</td> </tr> </tbody> </table> | | | | Ref. | Instruction | △1 | Torque to 20 - 27 N•m (15-20 ft-lb) | △3 | Torque to 240 -280 N•m (175-200 ft-lb) | △4 | Torque to 25-30 N•m (18-23 ft-lb) | △5 | Torque to 195-210 N•m (145-155 ft-lb). Apply service-able medium thread locker. | | | | | | | | | | | | |
| Ref. | Instruction | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △1 | Torque to 20 - 27 N•m (15-20 ft-lb) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △3 | Torque to 240 -280 N•m (175-200 ft-lb) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △4 | Torque to 25-30 N•m (18-23 ft-lb) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| △5 | Torque to 195-210 N•m (145-155 ft-lb). Apply service-able medium thread locker. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23* | 16U113 | KNOB KIT | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50* | | ELECTRONICS COVER | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 51 | 262657 | SWITCH, power, 40A | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 52 | 16Y458 | GASKET, junction box | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53* | 16Y460 | GASKET, side cover | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | 108788 | WASHER, flat | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56 | 124165 | SCREW, cap, socket head | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 69 | | LABEL, branding, Xtreme Z45 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | LABEL, branding, Xtreme Z25 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96 | 127721 | KNOB, impact control, preventer | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |

Mounting Hole Pattern

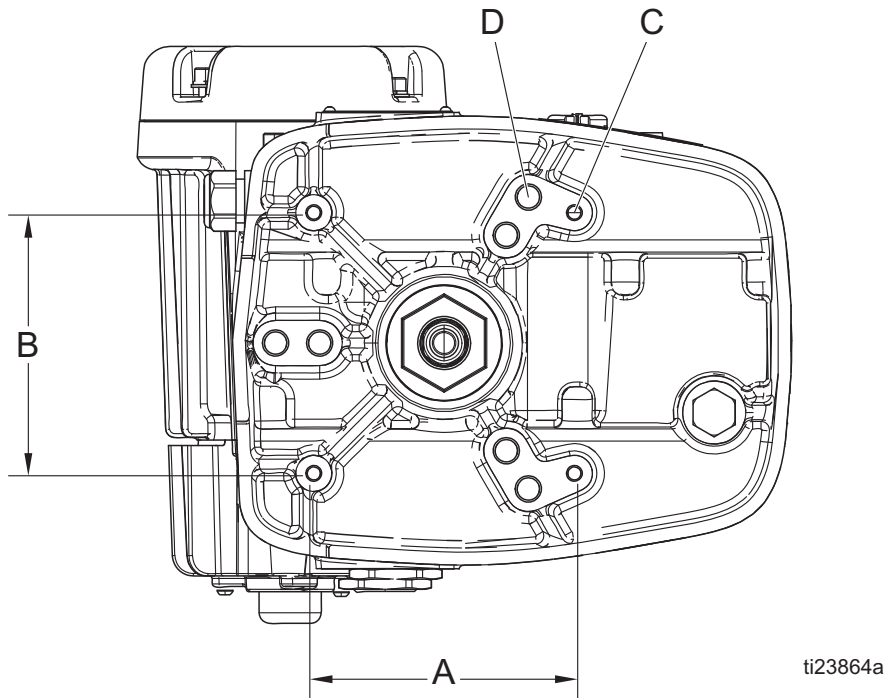
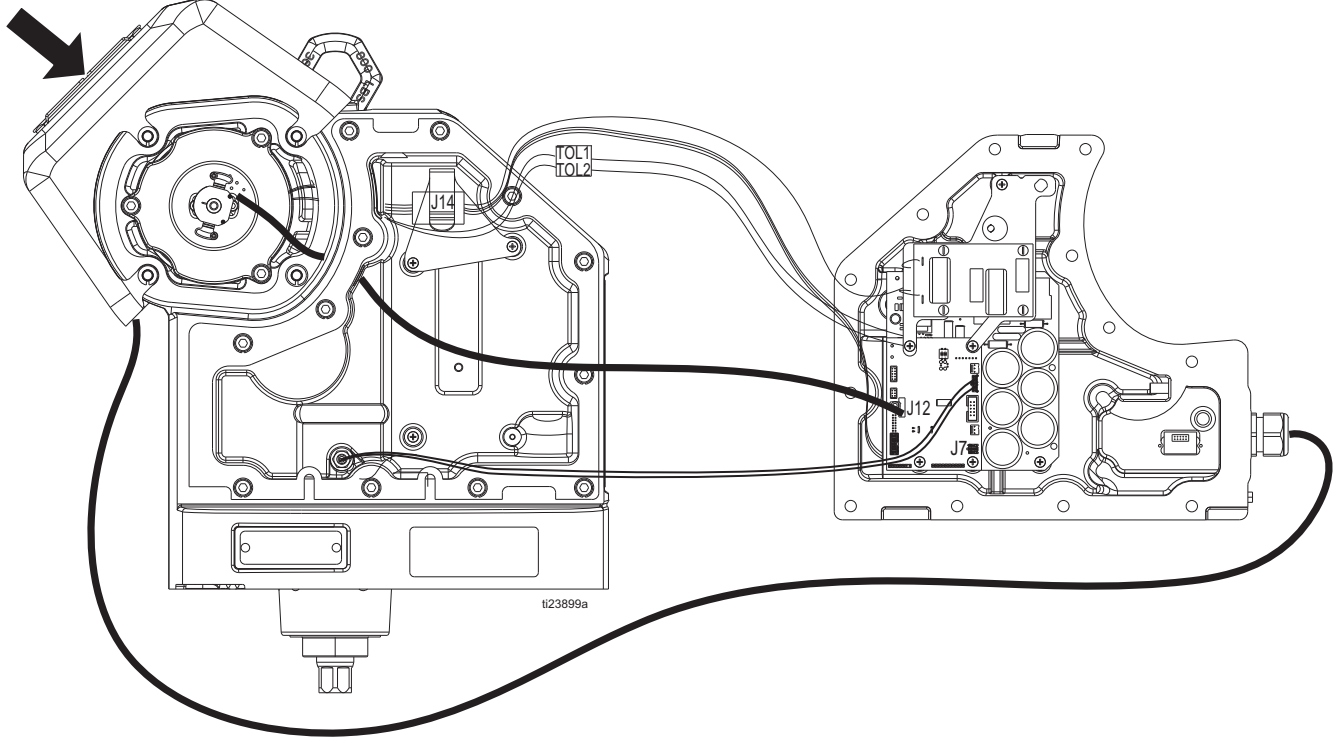


FIG. 31: Mounting Hole Pattern

| A | B | C | D |
|--------------------|--------------------|----------------------------|--|
| 6.186 in. (157 mm) | 6.186 in. (157 mm) | Four 3/8-16 Mounting Holes | Six 5/8-11 Tie Rod Holes: <ul style="list-style-type: none"> • 8 in. (203 mm) x 120° bolt circle OR <ul style="list-style-type: none"> • 5.9 in. (150 mm) x 120° bolt circle |

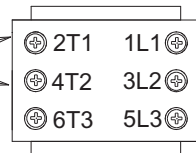
Wiring Diagram

AIR FLOW DIRECTION



Series A and B:

INCOMING LINE
POWER

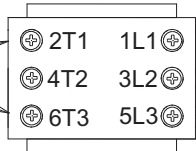


CONTROL
BOARD
POWER

FAN POWER

Series C:

INCOMING LINE
POWER



CONTROL BOARD
POWER

FAN POWER

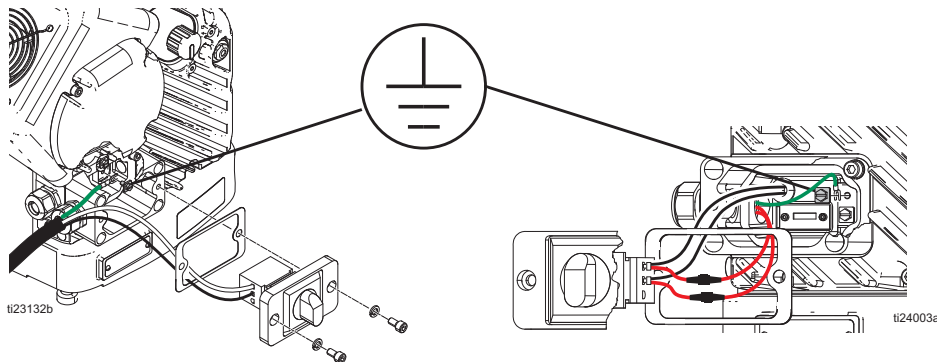
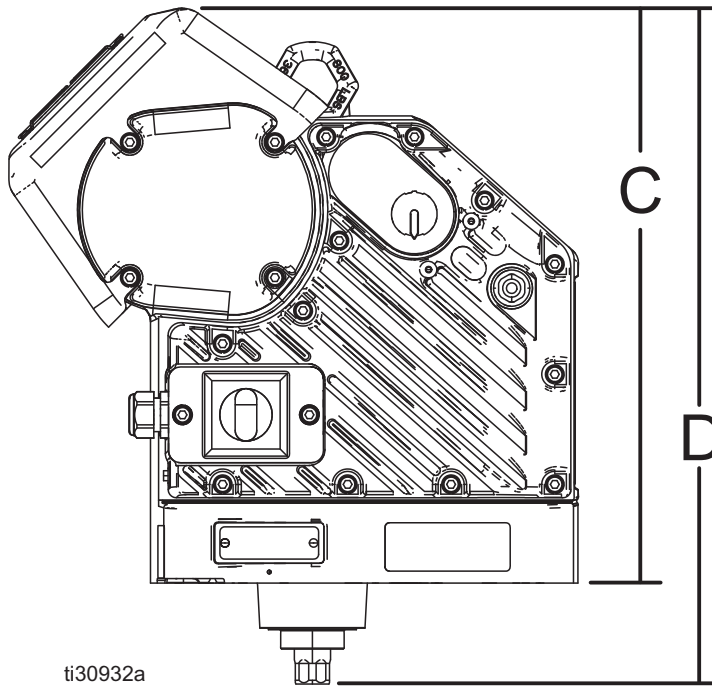
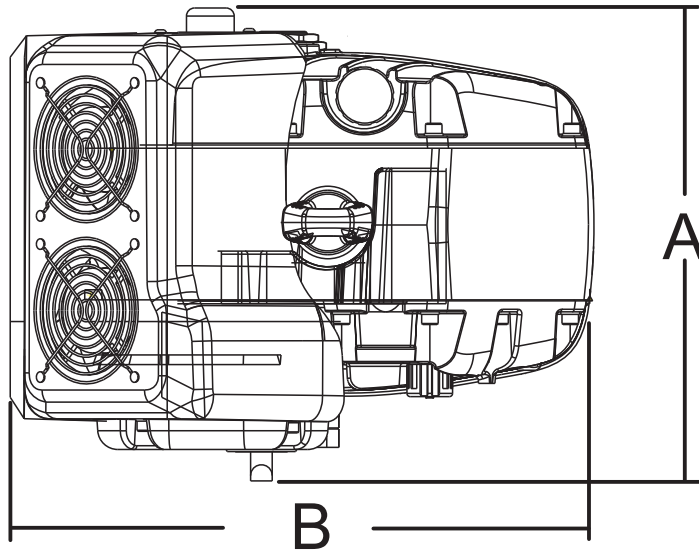


FIG. 32: Wiring Diagram

Dimensions



Driver Dimensions

| | |
|------------------|--------------------|
| A width | 15.30 in (0.390 m) |
| B depth | 18.3 in (0.465 m) |
| C mounted height | 18.3 in (0.465 m) |
| D total height | 21.5 in (0.545 m) |

Technical Data

| Electric High Pressure Airless Sprayer | | |
|--|--|---------------|
| | US | Metric |
| Maximum continuous cycle rate (To prevent premature pump wear, do NOT exceed maximum recommended speed of fluid pump) | 33 cycles per minute | |
| Weight | 115 lb | 52 kg |
| Operating temperature range | 23° to 120° F | -5° to 50° C |
| Input voltage | 200-240 VAC, single phase, 50/60 Hz | |
| Input current | 20A maximum | |
| Oil capacity† | 1.5 quarts | 1.4 liters |
| Oil specification† | Graco part number 16W645 ISO 220 silicone-free synthetic EP gear oil† | |
| Maximum force | 4200 lbf | 18.7 kN |

† The driver gear-box is shipped from the factory pre-filled with oil. Additional oil must be purchased separately.

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Original instructions. This manual contains English. MM 333233

Graco Headquarters: Minneapolis
International Offices: Belgium, China, Japan, Korea

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